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Nobuo Kimura

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EXAMINER

KATZ, VERA

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/533,580 | Applicant(s) KIMURA ET AL. | |
| | Examiner Vera Katz | Art Unit 1794 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 13-15, 23-29, 43, 44, 54-56, 58, 65 and 67 is/are pending in the application.
- 4a) Of the above claim(s) 54-56, 58, 65 and 67 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 13-15, 23-29, 43 and 44, is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is in response to the applicants arguments filed 02/26/10. The after final amendment dated 02/26/10 has been entered. Upon further search and consideration, a new rejection with new art is made below.

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2.

3. Claims 1-2, 13-15, 23-29, 43, and 44 are rejected under 35 U.S.C. 102(b) as being anticipated by or in the alternative under 35 U.S.C. 103(a) as obvious over Lortz (2004/0106697)

Considering claims 1-2, 13-15 and 23-29, Lortz teaches an aqueous dispersion of silicon dioxide powder, which is considered to be a dispersoid. The dispersoid has metal oxide bonds; [abstract, 0016]. All of the instant claims 1-2, 13-15 and 23-29 have

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a plurality of process steps incorporated into the claims after phrases “is obtained by” (claims 1-2, 13, 24, 27 and 28) or “is characterized in” (claims 14-15, 23, 25-26 and 29). These steps do not impact the structure of the end product (dispersoid) as claimed. If there is any difference, the difference would have been minor and obvious.

Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. Once the examiner provided a rationale tending to show that the claimed product appears to be the same or similar to that of prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product, see MPEP 2113.

The recitation that the process of making the dispersoid without the presence of an acid, base, and dispersion stabilizer is limited to the process of making the dispersoid and does not negate addition of base, acid, and dispersion stabilizer to the dispersoid after it is made. The limitation of the hydrolyzable groups is not necessarily present in the final dispersoid, but only in the method of making the dispersoid. Additionally, the amount of water is directed to the method of making the dispersoid and is not considered to limit a final dispersoid composition. After making the material, the water content may be adjusted and acids, bases, and additives may be added.

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The instant claims limit the method of making but do not limit the final dispersoid composition itself. The limitation of temperature is also directed to the method of making the material and not the final dispersoid. Absent a showing otherwise, the transmittance is expected to be commensurate with the claims given that the method of making the dispersoid is not seen to impact the final structure.

4. Regarding claims 43 and 44, Lortz further teaches the particle size of the silicon powder is less than 200 nm; [claim 11 and 0036]. This range is regarded to be an average range overlapping that of the instant claims. Additionally, it would have been obvious to one of ordinary skill in the art at the time of the invention to have selected the overlapping portion of the ranges disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness.

5. Claims 1-2, 13-15, 23- 29 are rejected under 35 U.S.C. 102(b) as being anticipated by or in the alternative under 35 U.S.C. 103(a) as obvious over Toki (6235260). Toki teaches a dispersoid, having metal-oxygen bonds, for example, tin or indium oxide. Toki further discloses that dispersoid can be obtained in the absence of a multidentate stabilizer; [col. 4, line 2]. Toki teaches that the use of acid or base is optional; [col. 6, line 60-62 and claim 1 and 2]. Based on the aforesaid, it is considered that the dispersoid can be obtained in the absence of all members selected from acid, base and stabilizer. The limitation of "the absence of all members....etc" relates to a precursor or an intermediate product for a dispersoid, not the end product, therefore, an addition of the absentees above to the end product-dispersoid is not prohibited. The

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dispersoid is obtained by mixing a metal compound having at least three hydrolysable groups. The water is added in divided portions to a metal compound, for instance, examples 27 to 42 teach that in the first step the water is added to the mixed separate solution of water-ethanol; the following step is mixing both metal compound solution and the water-ethanol solution. The temperature is -75°C , which is below 0°C . This range overlaps that of the instant claim. Alternatively, it would have been obvious to one of ordinary skill in the art at the time of the invention, to select the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness. The water is added in the amount of 0.6 mole/mole, which is within the range of the instant application. The step of admixing takes place at the temperature below 0°C ; [col. 12, lines 49-58.]. All of the instant claims 1-2, 13-15 and 23-29 have a plurality of process steps incorporated into the claims after phrases "is obtained by" (claims 1-2, 13, 24, 27 and 28) or "is characterized in" (claims 14-15, 23, 25-26 and 29). While these steps are not considered to add structure to the end product (dispersoid) as claimed, Toki teaches similar methods and materials as explained above. Therefore, based on the similarities of materials used, and common steps in the method of making the dispersoid, the property of a transmittance range is expected to be commensurate with the instant claim limitation.

6. Regarding the use of an acid, base, and stabilizer, this limitation is considered to limit the method of making only, and not the final composition. After making the material, acids, bases, and additives may be added. Additionally, Toki teaches that the use of acid or base is optional and a stabilizer is not present; [col. 6, line 60-62 and

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claim 1 and 2, col. 4, line 2]. Though the working examples employ an acid addition, the acid addition is variable, and in some examples the acid addition is mild and close to neutral with no negative impact on the dispersoid structure as shown; [Table 4, examples 37 and 38]. Therefore, Toki is taken to disclose that the presence of an acid, base, and stabilizer are optional, therefore including the lack thereof. Alternatively, the person of ordinary skill in the art would appreciate the mild acid addition shown in the examples and their resultant small or zero impact on the dispersoid formed and it would have been obvious to produce the dispersoid in an acid-free environment with a reasonable expectation to success.

Response to Arguments

7. Applicant's arguments filed 02/26/10 in response to the Office Action dated 01/22/10 have been fully considered.

8. The declaration under 37 CFR 1.132 filed 02/26/10 is sufficient to overcome the rejection of claims 1-2, 13-15, 23-25 and 43-44 under 35 U.S.C. 102(a) based upon Toki (WO2003-014022).

9. In view of applicant's amendments and arguments, the applicant traverses the rejection of claims 27-29 under 35 U.S.C. 102(b)/ under 35 U.S.C. 103(a) over Toki (6235260). The traversal is on the ground that Toki does not suggest the absence of all members selected from the group consisting of acid, base and a dispersion stabilizer. The Examiner respectfully disagrees. It is an Examiner position that Toki teaches that

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the use of acid or base is optional and a stabilizer is not present; [col. 6, line 60-62 and claim 1 and 2, col. 4, line 2]. Though the working examples employ an acid addition, the acid addition is variable, and in some examples the acid addition is mild and close to neutral with no negative impact on the dispersoid structure as shown; [Table 4, examples 37 and 38]. The person of ordinary skill in the art would appreciate the mild acid addition and it would have been obvious to try producing the dispersoid in acid-free environment with a reasonable expectation to success.

The limitation of "the absence of all members...,etc." relates to the method of making the product of a dispersoid, and not the end product, therefore, addition of an acid, base, or stabilizer to the end product is not precluded.

In addition, the disclosure in the instant specification of specific metals showing criticality of the process limitations is not commensurate in scope with the subject matter encompassed by instant claim.

Finally, as it was shown above, in the rejection section of the Office Action, the process steps of the instant claims do not affect the structure of the dispersoid as claimed. As explained in the rejections, the applied prior teachings would be expected to arrive at the claimed limitations. Accordingly, the aforementioned rejection is maintained.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure, see attached form PTO-892.

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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vera Katz whose telephone number is (571)270-7082.

The examiner can normally be reached on M - Th 8-5.

12. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JENNIFER McNEIL can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Vera Katz/
Examiner, Art Unit 1794

/Jennifer C. McNeil/
Supervisory Patent Examiner, Art Unit 1794